

## U.S. DEPARTMENT OF COMMERCE PATENT &amp; TRADEMARK OFFICE

CUSTOMER NUMBER: 38327

Form PTO 1390  
(REV. 01-2003)TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. §371

Attorney's Docket Number

HIRA.0178

U.S. Application Number (if known)

10/522241

International Application Number  
PCT/JP03/09438International Filing Date  
25 July 2003Priority Date Claimed  
25 July 2002

Title of Invention

A SPIN TRANSISTOR BASED ON THE SPIN-FILTER EFFECT AND A NONVOLATILE MEMORY USING SPIN TRANSISTORS

Applicant(s) for DO/EO/US

SATOSHI SUGAHARA AND MASAOKI TANAKA

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. §371.
  2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. §371.
  3. ☒ This is an express request to begin national examination procedures (35 U.S.C. §371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
  4. ☒ The US has been elected (Article 31).
  5. ☒ A copy of the International Application as filed (35 U.S.C. §371(c)(2))
    - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
    - b. ☒ has been communicated by the International Bureau.
    - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
  6. ☒ A English language translation of the International Application as filed (35 U.S.C. §371(c)(2)).
    - a. ☒ is attached hereto
    - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
  7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. §371(c)(3))
    - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
    - b. ☒ have been communicated by the International Bureau.
    - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
    - d. ☐ have not been made and will not be made.
  8. ☒ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. §371(c)(3)).
  9. ☒ An unexecuted oath or declaration of the inventor(s) (35 U.S.C. §371(c)(4)).
  10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. §371(c)(5)).
- Items 11 to 20 below concern other document(s) or information included:**
11. ☒ An Information Disclosure Statement under 37 C.F.R. §§1.97 and 1.98.
  12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. §§3.28 and 3.31 is included.
  13. ☐ A preliminary amendment.
  14. ☐ An Application Data Sheet under 37 C.F.R. §1.76.
  15. ☐ A substitute specification.
  16. ☐ A power of attorney and/or address letter.
  17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825
  18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
  19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
  20. ☒ Other items or information: Request for Priority and Preliminary Amendment

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5) <b>10/522241</b>		INTERNATIONAL APPLICATION NO. <b>PCT/JP03/09438</b>		ATTORNEY'S DOCKET NUMBER <b>HIRA.0178</b>	
				Applicant use	Office use only
21. <input type="checkbox"/> The following fees are submitted:					
<input type="checkbox"/> a) Basic national fee		\$300.00		<b>\$300.00</b>	
<input type="checkbox"/> b) Examination fee		\$200.00		<b>\$200.00</b>	
<input type="checkbox"/> c) Search fee		\$500.00		<b>\$500.00</b>	
<b>TOTAL OF ABOVE CALCULATIONS =</b>		<b>\$1,000.00</b>		<b>\$1,000.00</b>	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
xx - 100 =	/50 =		x \$250.00		
Surcharge of <b>\$130.00</b> for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 C.F.R. §1.492(e)).				<b>\$0.00</b>	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	70	50	x \$50.00	<b>\$2,500.00</b>	
Independent Claims	21	18	x \$200.00	<b>\$3,600.00</b>	
Multiple Dependant Claims (if applicable)			+ 360.00	<b>\$0.00</b>	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$7,100.00</b>	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2				<b>\$0.00</b>	
<b>SUBTOTAL =</b>				<b>\$7,100.00</b>	
Processing fee of <b>\$130.00</b> for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. §1.492(f)).				<b>\$0.00</b>	
<b>TOTAL NATIONAL FEE =</b>				<b>\$7,100.00</b>	
Fee for recording the enclosed assignment (37 C.F.R. § 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. §§ 3.28, 3.31). <b>\$40.00 per property</b>				<b>\$0.00</b>	
<b>TOTAL FEES ENCLOSED =</b>				<b>\$7,100.00</b>	
Amount to be Refunded:					\$
Amount to be charged					\$
<p>a. <input checked="" type="checkbox"/> A check in the amount of <b>\$7,100.00</b> to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account Number 08-1480 in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account Number 08-1480. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</b></p>					
<p><b>Note:</b> Where an appropriate time limit under 37 C.F.R. §1.495 has not been met, a petition to revive (37 C.F.R. §1.137(a) or (b)) must be filed and granted to restore the application to pending status.</p>					
Respectfully submitted,					
<p>Stanley P. Fisher Registration Number 24,344</p> <p> Juan Carlos A. Marquez Registration Number 34,072</p>					
<p><b>REED SMITH LLP</b> 3110 Fairview Park Drive Suite 1400 Falls Church, Virginia 22042 (703) 641-4200 January 25, 2005</p>					